

STIMULATING THE AWARENESS OF PROSODY AS AN IMPORTANT FACTOR IN THE TEACHING OF FOREIGN LANGUAGES

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RESUMO: O ensino das características suprasegmentais da fala raramente é incluído nos cursos de língua estrangeira e não é considerado prioridade na maioria dos programas universitários de ensino de Língua Inglesa. Na tentativa de estimular uma conscientização maior do papel da prosódia na comunicação efetiva em Língua Inglesa este artigo pretende utilizar exemplos de projetos de pesquisa desenvolvidos por alunos do primeiro ano de um curso de Licenciatura em Língua Inglesa para ilustrar a contribuição positiva de estratégias de ensino embasadas nos princípios da aprendizagem contextualizada, colaborativa e centrada no aluno.

PALAVRAS-CHAVE: consciência prosódica; aprendizagem centrada no aluno; pensamento autônomo; projetos colaborativos de pesquisa.

ABSTRACT: The prosodic characteristics of English are rarely included in university courses related to the teaching of foreign languages, nor is the teaching of English suprasegmentals considered a priority in the majority of ELT programs. Based on the principles of contextualized, collaborative and student-centered learning, this paper will use examples taken from a Prosody course taught to first year undergraduate students to illustrate how the inclusion of self-directed research projects can stimulate a growing awareness of the importance of prosody as an important factor in the teaching of effective language communication.

KEYWORDS: prosodic awareness; student-centered learning; independent thinking; collaborative research projects.

0. Introduction

Linguists, communication engineers, psychologists, cognitive scientists, computer scientists and engineers, electrical engineers, systems analysts, and many other professionals all firmly believe that prosody is an important factor in the communication process. Interestingly, a huge majority of language teachers do not seem to have

any idea that prosodic characteristics can in fact completely alter the meaning of an oral message, not only in conversations between speakers of the same language but even more so between speakers of different languages. It is therefore imperative that courses which qualify teachers of foreign languages should provide their students with knowledge about this area. When we examine some of the teaching materials which are most frequently used in foreign language classrooms, we find very little information related to prosody, and what there is, is presented in a very sketchy manner with hardly any references at all to any kind of context. Since very few teachers have had any training at all in the area of prosody, these sections of the teaching books are frequently ignored in order to spend more time on vocabulary and grammar.¹

One of the concepts included in some course books is the notion of stressed syllables being used to highlight important information – an extremely useful concept for the teaching of foreign languages which could be used to focus students' attention when listening. But teachers are rarely aware of the complexity involved. For example, Calhoun, working in the School of Philosophy, Psychology & Language Sciences at the University of Edinburgh (the name of the school itself indicating the interdisciplinary nature of the research involved), wrote an interesting paper which investigates the role of prosodic prominence, where she states that:

Words which are prosodically prominent are 'highlighted' in relation to the words around them. One of the main reasons speakers do this is to mark the highlighted word as more informative than others in the utterance. However, informativeness has been conceptualised in a number of ways in linguistics, psycholinguistics, and computational linguistics, including focus/background, given/new status, or predictability [...] We present a framework within which to understand how informativeness, and prosodic structure, affect the production of prominence in English. (2010: 3)

Clearly investigations in the area of prosody require interdisciplinary connections. It is not enough simply to measure the fundamental frequency, intensity, and / or duration of specific elements in the speech signal. We need to be aware of the connections between production and perception, the effect of pragmatic meaning, the innumerable factors involved in defining affective or attitudinal meaning, sociolinguistic implications such as the social meaning of rhythmic and prosodic variability, as well as innumerable other variables.

¹ I personally find it intriguing that many teachers of foreign languages who are themselves successful communicators do not seem to be aware of the extent to which their own use of prosody contributes towards their success.

1. Basic pedagogical strategies which promote effective learning

When we examine the endless possibilities for investigation in this area we begin to wonder what exactly we should concentrate on in order to raise the awareness of the importance of prosody for teachers of foreign languages. However, it may be the case that we should not only be thinking of the content but also the strategies that could be used when teaching in this field. In order to exemplify possibilities that could be explored, this paper will analyze some of the content and strategies used by the author when teaching a 60 hour Prosody course to first year undergraduates who are studying to become teachers of English as a foreign language. This subject is taught in the second semester and requires students to have a pass in the 60 hour course in Phonetics which is taught during their first term. In order to discuss different possibilities for promoting some level of awareness of the prosodic content of oral communication, a selection of pedagogical strategies which contribute towards effective investment in the learning process will now be presented.

1.1 Student-centered learning

It is generally accepted that people tend to remember about 10% of what they read, 20% of what they hear, 70% of what they say and write and 90% of what they do. It is therefore extremely important that teachers should not limit themselves to the 'lecture' style of teaching, believing that their students are acquiring knowledge through their reading and by listening to what their teachers are telling them. Even when students are required to write papers as part of their evaluation, if the papers are merely reporting what others say, students will not necessarily grasp the implied meaning of the subject matter they are studying. They need to actively investigate topics which interest them and make relevant connections between the content they are studying and their own lives in order to become more personally involved in the content under discussion. According to Nunan (1999: 11) "In order to understand the complex processes underlying my students' attempts at learning, I realized that I had to find out what they felt they wanted to learn and how they went about learning".

Thus for student-centered learning to function effectively:

- Teaching-learning has to be recognized as a process not a product;

- Topics need to be relevant to the students' lives, needs, and interests;
- Students' different thoughts and views should be considered a necessary input;
- Students have to be given choices, they should be given opportunities to learn at their own pace and should be encouraged to use their own learning strategies;
- Students should be more intrinsically than extrinsically motivated;
- Students should be stimulated in such a way that they become more actively engaged in creating, understanding and connecting to knowledge, instead of simply memorizing information;
- Sharing and interaction between students and teachers should be promoted.

Nevertheless, we must remember that one of the problems related to the implementation of student-centered learning is the fact that students are not normally accustomed to this form of learning. The majority of students are still used to being treated as passive containers ready to receive and possibly to memorize information handed on to them from their teachers – no questions asked! Thus, although student-centered proposals may be included as part of the learning process, it is not always the case that students will know how to make the best use of them and they will often need a great deal of assistance from their teachers before they truly understand what is being asked of them.

Let us examine one or two of the strategies included in the UFES Prosody course to illustrate. For example, when students are asked to summarize an article, they are also asked to come up with at least two different proposals for possible research projects related to the concepts they have been reading about. In this way, they are required to read actively and make relevant connections between the main concepts in the text and their own areas of interest. As they register their own ideas, the teacher gets to know a little bit about the students, and as each student's ideas are shared with the whole group, they learn to appreciate the myriad possibilities for research which may arise from reading one simple text. In this way the teacher also becomes aware of different connections between the reference text and the students in any particular group. For example, when students were asked to come up with project suggestions based on the first chapter from J. C. Wells' book '*English Intonation: an introduction*' (2006), suggestions and questions such as the following arose²:

² References to students' work will all refer to work produced by students during the semester 2011.2 in order to give readers an idea of the variety of topics which arise from one group. Extracts from students work will be presented in italics.

[...] interview teachers to find out what they know about intonation and how important they think it is; find out what EFL students at different levels know about intonation; what are the similarities and differences between the intonation of Brazilian Portuguese and English?; how can different kinds of intonation change the meaning of the same phrase?; what are the prosodic differences between a Brazilian sports narrator and one from another country when a goal is scored?; I would like to record different people reading the same poem to see if they stressed different words; compare the narration of a fight championship and artistic gymnastics to find out what happens with the speed of the voice; how do speakers of different languages convey the same emotion?; do all EFL teachers understand enough about intonation to be able to teach it properly to their students?; use videos of sitcoms to teach students that intonation can change meaning; compare EFL students of different ages to find out whether their intonation patterns are different; discover whether it is easier for an adult or a teenager to learn about intonation; find out how tone, tonality and tonicity are present in the work environment and how people talk when they are at home compared with when they are at work.

Some of these initial questions can lead to the development of group projects later on in the course, but since the initial ideas are shared amongst the group as a whole, and connections between different ideas explored, it is not always the case that the author of a specific idea will necessarily be a member of the group which ends up investigating this same idea as a research project. When students are stimulated to work in pairs or small groups on a project which they themselves have designed, they become much more motivated to invest in the task. The students' motivation – and the myriad ideas they decide to work with – contribute towards a much more invigorating classroom experience for the teacher.

Although there are many different reasons why faculty members choose to adopt a student-centered learning approach, they might be placed into two broad categories. First, it is enjoyable. Faculty members who have adopted one or more of these approaches report that they are energized. Second, there is a growing set of results on how these approaches lead to improved student learning. (FROYD & SIMPSON, 2012:3)

1.2 Development of independent thinking

An individual paper is required as part of the course evaluation when students are asked to interact with an online tutorial (Prosody on the Web³), made available by the University College London. Students

³ The POW tutorials were written and recorded by Sue Peppé and John Maidment. All text, sounds and images are © Department of Phonetics & Linguistics, University College London,

are asked to go through the tutorial, marking their answers and taking notes of any problem areas. While doing the exercises, students are expected to observe factors such as pause distribution, vowel length, loudness, pitch height and pitch movement in order to identify which factors they are using in order to carry out the different instructions in each of the tutorials. All three tutorials should then be analyzed according to the theoretical concepts studied in class. Students should try to answer questions such as: *What is the main aim of each tutorial? Do the exercises in fact achieve their objective? Could they be made more interesting or more challenging? What improvements can be suggested? Were there any specific problems encountered during the exercises? Which prosodic factors might have caused these problems? What suggestions might be offered which would help to reduce the problem areas?* If the exercises are easy, the student should try to analyze the acoustic factors which contribute to the correct identification of concepts being explored in each tutorial and if the students find they are having problems with a specific area, they are encouraged to try to understand more clearly which prosodic factors are causing their difficulties.

As part of this analysis, students are required to use specific examples from their own performance to illustrate the points which are being discussed, and at least one example from each tutorial should be analyzed in explicit detail using the WASP program⁴ to illustrate the concepts being presented. In this way students are being encouraged to develop independent thinking as they analyze their own performance, thus involving student-centered learning as well.

Independent thinking continues as each student shares their different ideas in order to define research possibilities for the final paper. However, since the final papers will be developed in pairs, independent thinking must be shared with a partner and collaborative (or cooperative) strategies developed in order for students with different ideas to be able to work together successfully – not always an easy task!

1.3 Cooperative learning

When Cooperative Learning is implemented effectively we can expect higher self esteem and achievement, increased retention, greater social support and more on-task behavior. Students attain greater collaborative skills and intrinsic motivation, increased perspective

June 2000. Available at: <http://www.eptotd.btinternet.co.uk/pow/powin.htm> Accessed on: 15.08.2011.

⁴ WASP is owned by Mark Huckvale, University College London. Program available at: <http://www.phon.ucl.ac.uk/resource/sfs/wasp.htm> Accessed on: 15.08.2012.

taking, better attitudes toward teachers and school and greater use of higher level reasoning. (JOHNSON, JOHNSON, & HOLUBEC, 1990) Authors Ellis & Whalen (1990: 14) maintain that the motto of the cooperative classroom is "we sink or swim together" and they define the first of the essential characteristics of cooperative learning as *positive interdependence*. "Teachers must structure cooperative learning activities so that students are genuinely interdependent. No member of the group can be successful unless all are successful." Their second essential characteristic of cooperative learning is *individual accountability*. "Every student must know that she or he will be held accountable for learning the material. No one is allowed to hitchhike or opt out of the group's task."

However, these authors are also aware that the social skills necessary for a group to function effectively need to be taught, so they suggest that teachers need to invest in three areas. They need to: "monitor their students' behavior while they're working in groups; give their students feedback on their use of social skills and help them become conscious of their use of these skills; and intervene to teach needed skills whenever appropriate." (Ibid.: 15) Cooperative learning promotes controversy. Each member of a group has different opinions and different kinds of knowledge about any subject, and as group members share their knowledge they are forced to communicate as effectively as possible in order to acknowledge and appreciate different points of view which should help them to analyze their own thinking and become more flexible as they listen to others.

1.4 Communication skills

In order to qualify as language teachers, the students must be able to communicate as successfully as possible, developing their speaking skills, their listening skills, as well as their reading and writing skills. When using computers to work with the WASP program, the POW tutorials, when searching for interesting articles related to the papers, students are always encouraged to speak to each other in small groups as they carry out their allotted tasks, thus investing in their oral skills as they read and take notes.

Once they have found a partner and start thinking about the topic for their research project which will form the basis for their final papers, each student is required to find an article or book chapter which will help form the theoretical basis for their paper. They then present the main ideas of their selected article orally to the rest of the group – who practice their listening skills as they take notes of the concepts they find interesting in order to produce a summary at the end of the presentation sessions, thus combining all four skills.

Students are also required to produce written summaries as well as two written papers, and are encouraged to use the feedback provided by the teacher in order to rewrite any of their written work – an essential step for the development of more effective writing skills. In order to write, students need to invest in their academic reading to produce a convincing theoretical background for their papers and when they have finished analyzing their data for their final papers, each pair must give an oral presentation of their work. Of course these examples are based on the work required for evaluation purposes, but throughout the course, most normal classroom work involves all four communication abilities.

Nevertheless, in my experience, one of the most difficult skills to develop seems to be the skill of effective listening. According to Costa (2001:81), “Some psychologists believe that the ability to listen to others, empathize with them, and understand their points of view is one of the highest forms of intelligent behavior.” In schools, students are frequently told to be quiet and to listen to the teacher – but in these circumstances, students are not being asked to listen critically, compare what the teacher is saying to what they themselves believe to be true. They are being asked to memorize what is being said by the teacher, the voice of authority, and no questions asked. Students are rarely encouraged to emit their own opinions or even to share their own ideas with their colleagues, and are certainly never taught the art of effective listening. Costa (Ibid) explains why effective listening is so important:

We want our students to learn to devote their mental energies to listening to other speakers and thinking through their positions. We wish students to hold in abeyance their own values, judgments, opinions, and prejudices in order to entertain another person’s ideas. This is a very complex skill, requiring the ability to monitor one’s own thoughts while attending to someone else’s words. This does not mean that one must agree; a good listener simply tries to understand what the other person is saying.

As Costa says, this is an extremely complex skill, and good listeners are few and far between. Nevertheless, it is an ability which we should try to develop in ourselves and also in our students in order to cultivate an ever expanding mindset which will positively relish an input of completely disparate ideas, thus boosting the number of opportunities for learning.

1.5 Problem-solving skills

According to Costa (2001: 80):

By definition, a problem is any stimulus, question, task, phenomenon, or discrepancy whose explanation is not immediately known. We are interested in student performance under those challenging conditions that demand strategic reasoning, insightfulness, perseverance, creativity, and craftsmanship to resolve a complex problem. Not only are we curious about how many answers students know, but also about how they behave when they don't know – in particular, what habits of mind they fall back on. We are interested in observing how students produce, rather than merely reproduce, knowledge. The critical attribute of intelligent human beings is not only having information, but also knowing how to act on it.

In order to stimulate the necessary skills which are essential for solving problems, opportunities must be created for students to develop these skills. They must be taught to analyze problems – preferably involving topics which interest them – in order to identify the main hypotheses or ideas involved. They should ask themselves: *What do I know? What do I need to know? What needs to be done?* They should learn to gather, organize, analyze, interpret and present their findings. They should be taught to look for patterns, make models, work backwards, draw diagrams, make up tables, solve a simpler problem first, break a problem up into more manageable parts, test all possibilities, seek exceptions, ask themselves whether they have seen similar problems before. Students need to learn to use appropriate attitudes or '*habits of mind*' (COSTA, 2001⁵), such as *persistence* – since efficient problem solvers do not give up easily; *managing impulsivity* – students often write down the first thing that comes into their minds, whereas effective problem solvers think before they act, analyze alternatives and put together a plan of action. Students need to *think more flexibly* – since flexible thinkers:

[...] consider alternative points of view and are comfortable dealing with multiple sources of information simultaneously. [They] nonetheless display confidence in their intuition. They tolerate confusion and ambiguity up to a point and are willing to let go of a problem, trusting their subconscious to continue creative and productive work on it. (Ibid., p. 82)

On the other hand, people who are unable to think flexibly tend to perceive everything from their own point of view, thus losing the opportunity to learn from others.

⁵ COSTA presents 16 different habits of mind in his article, of which I have only included 3as an illustration.

As part of the Prosody course which is serving as an example throughout this paper, students are asked to identify problem areas in their reading; they are asked to listen attentively to their colleagues in order to expand their own viewpoint; and they are asked to identify similarities between the different problem areas which each student has identified as being interesting in order to form groups which share analogous concerns. Once groups have been formed, they must then apply all the problem solving skills available to them in order to plan the necessary steps required to investigate the topic they have defined. They need to find relevant theoretical material, produce a viable hypothesis, identify a relevant data base which will allow them to investigate their hypothesis, collect and analyze their data, and finally make appropriate connections between their results and the theoretical references they have read. Tasks which are much more challenging, and infinitely more interesting and rewarding, than the rote memorization of set texts – not only for the students, but also for the teachers.

1.6 Contextualized Teaching and Learning (CTL)

It has long been acknowledged in the literature that when content is presented to students within authentic contexts which are familiar to them, or when they are encouraged to make links between theoretical concepts and areas of personal interest, students become more motivated and the learning process is seen to be more effective. For example, when Lynch & Harnish⁶, studied the effects of CLT at the College of Education, University of Georgia, they summarized their findings as follows:

Through the use of CTL strategies, we concluded that (a) engagement and motivation of students was increased, (b) student attitudes toward learning were improved, (c) behavior was improved, and (d) resulting interactive effects led to deeper understanding, retention, and application of knowledge by students. These are important outcomes of education that contribute to improved student achievement. (2003: 4)

In an article by Predmore (2005, online), Richard Lynch, the project's principal investigator, declared that "ninety-four percent of the students said that they learned a lot more in CTL-strategy classes than in other traditional courses in that same subject area."

Contextual learning is also supported by data from the area of neuroscience: "From this perspective, contextual teaching and learning

⁶ Richard L Lynch (Co-Director) and Dorothy Harnish (Project Manager), of the Occupational Research Group at the College of Education, Athens, University of Georgia, studied the effects of CLT over a period of 3 years, involving more than 60 faculty from 15 departments and over 1000 pre-service teacher education students.

stimulates the students' brain to develop patterns and create meaning by linking experience and sensory stimuli to new knowledge through a convergence in real-life application" (BAKER, et al., 2009: 17). The same authors declare earlier in their text that one of the aims of the CTL approach:

[...] is to capture a student's attention by illustrating the relevance of the learning experience. CTL helps students find and create meaning through experience, drawing from prior knowledge in order to build upon existing knowledge. A primary principle of CTL is that knowledge becomes the students' own when it is learned within the framework of an authentic context. (Ibid., p.12)

At the very beginning of the Prosody course, students are asked to record their own voices when they work with the WASP program for the first time. And as they attempt to record the same word with different pitch movements they immediately perceive that meaning is affected. They also relate their own recordings to data they meet in their reading. See below two examples from their initial work sheet:

Examples from the 1st work sheet used in the Lab to introduce students to the WASP program:

Record yourself saying the word 'HELLO' using different kinds of pitch movement in order to understand the relationship between 'pitch' and 'fundamental frequency' or F0 - measured in Hertz (Hz). Say the word 'HELLO', and register the F0 measurements on the Pitch Track:

Pitch Movement of 'HELLO'	Initial F0 measurement	Measurement of midpoint* (if needed) (highest / lowest)	Final F0 Measurement	Total amount of movement
(a) on a level tone:				
(b) rising from low to high				
(c) falling from high to low				

*If you have a rise-fall or a fall-rise, you need to make 3 measurements: initial → highest / lowest → end point. The total amount of movement is then: (initial → highest / lowest) + (highest / lowest → end point) = total movement.

Read the sentence 'JOHN CAN'T HAVE FORGOTTEN SALLY'S BIRTHDAY' (taken from p.161 of the handout by Ashby & Maidment)

and measure the duration of each foot. Compare your results with the measurements given on p. 161 of the handout.

Duration Measurements	JOHN	CAN'T HAVE FOR-	GOTTEN	SALLY'S	BIRTHDAY
Ashby & Maidment	406 ms	542 ms	427 ms	500 ms	676 ms
Your own reading					

In this way, students start off the course by making personal connections to the theoretical concepts being studied, and, as the course continues, they are constantly encouraged to apply their knowledge of prosody to personal areas of interest by making links to authentic contexts which motivate them.

2. Overall Structure of the Prosody Course

The course starts with a general introduction to some of the basic prosodic concepts (*F0, pitch movement, intensity, duration, stress, prominence, rhythm, tonality, tonicity, tone, etc.*). Students also learn to use the WASP program (HUCKVALE, 2009) during this period as they relate some of the theoretical concepts to practice. They then go through the exercises on the Prosody on the Web (POW) site provided by Peppé & Maidment (2001) and explore different functions of intonation (*attitudinal, grammatical, discourse*). They learn about tone unit structure; concepts related to intonational variation (using the IViE corpus, GRABE et al., 1997-2002); and analyze some of the factors involved in experimental design and the control of data variables, etc. The class then divides up into pairs or groups of 3 in order to investigate the prosodic characteristics of an area which interests them. They search for relevant articles to provide explicit theoretical context and carry out their own data analysis – with help from their colleagues and myself. The summary below illustrates the fact that the evaluation exercises require students to use their problem-solving skills as they relate theoretical concepts to personal experience and areas of interest while collaborating with their peers.

Summary of 'Introduction' by J.C. Wells with at least 2 ideas for possible research	Acoustic analysis of <i>tonality</i> , <i>tonicity</i> and <i>tone</i> examples	Analysis of POW exercise: academic paper format	Summary of concepts presented during oral presentations	Oral presentation of theoretical background for research project	Oral presentation of data analysis + conclusions of research project	Written version of the Final paper	TOTAL
5 points	5 points	25 points	5 points	10 points	15 points	35 points	100 points

Table 1: Summary of the evaluation exercises for the Prosody course - UFES

According to Attard et al (2012: 33):

Astin (1993) and Tsui (1999) find that self-assessed growth in critical thinking is positively related to such instructional factors as having a paper critiqued by an instructor, conducting independent research, working on a group project, giving a class presentation, and taking essay exams. On the other hand, Tsui (1999) finds that a negative relationship exists with the taking multiple-choice exams, as a mode of assessment popular in traditional higher education systems.

Given that all papers receive written feedback from the teacher and can be rewritten in order to improve their initial grades, it is clear that appropriate elements which promote growth in critical thinking have been included in the course structure. For example, the POW paper is based on the analysis of personal results using WASP diagrams to illustrate. Students apply theoretical concepts to their own experience as they do the online tutorials and illustrate the concepts using visual analysis. Raquel, a student from the 2011.2 class, summarizes the main points of the paper as follows:

The main purpose of this paper is to analyze the POW site and make a connection between the data provided in the website, the concepts of prosody and the teaching of English. The POW site can be a very useful tool in the learning process. As a learner, it really helped me to understand the Prosody concepts. The activities in the site induce you to analyze the sentences thinking about the factors such as pitch height, intensity, duration and others. In fact, the POW site turned the learning process into a more simple and concrete experience. We already known that Prosody is important but *how can we show students the importance of prosody?* The POW site can help in this process. Through this website, students can go further and listen in order to practice examples which will help them to understand the importance of intonation. An important point is that in the beginning of each tutorial there is a brief explanation about the content, so students can use it as a guide.⁷

⁷ Examples taken from students' texts will be presented verbatim.

Thus, in order to produce this paper, student-centered learning is used to develop problem-solving skills in order to stimulate independent thinking.

3. Excerpts from Students' Final Project Papers 2011.2

I will now present short excerpts from each of the papers produced by the Prosody class of 2011.2 to illustrate the variety of topics investigated by the same group of students. I hope these fragments will give readers a taste of the students' excitement as they formed small collaborative groups to explore many different prosodic concepts in order to find answers to their own questions.

3.1 A brief analysis of pitch movement in nursery rhymes: comparison of a non-native speaker and a native speaker (Alécio & Wendell)

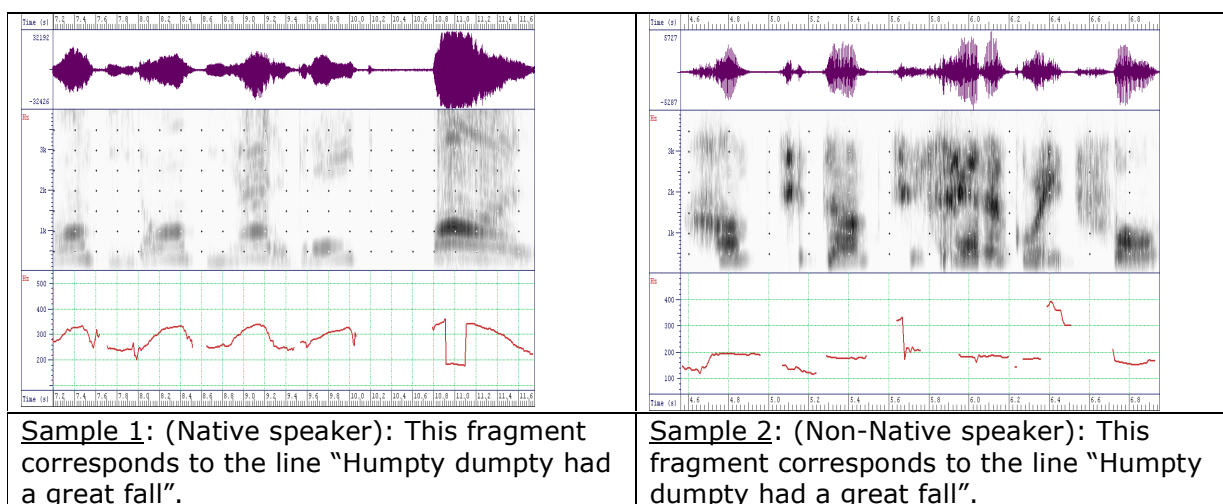


Figure 1: Samples from two different speakers reading the same line from a Nursery rhyme

Using nursery rhymes in the class helps make the learning process become more enjoyable and motivating while at the same time teaching kids to develop the rhythm of the language they are learning and enrich their vocabulary. [...] It is important to highlight that the native speaker's reading is lively and motivating, mainly because of all prosodic resources used by him. We can also see that the correct use of intonation goes beyond simply conveying emotion, but reaches the point of engaging the listener with a speaker's feelings and thus has an interesting approach towards discourse manipulation.

Comments: After reading about stressed and unstressed syllables and their contribution to the rhythm of different languages, students were asked to form pairs and choose a poem which appealed to them

from the selection of poetry books provided. They were then required to analyze at least 8 consecutive lines from the poem, marking the stressed and unstressed syllables and to observe any regular patterns used by the author. After analyzing one poem, they then had to choose a different style of poem, carry out a similar analysis, and compare the results, thinking about the context of each poem and the cultural and historical variables involved. They were also asked to examine the vowels and consonants to see whether they could detect any examples of alliteration, rhyme, etc which contributed to the musicality of each text. Since they had studied phonetics in the previous term, it's important to make explicit connections between knowledge already acquired and knowledge which is in the process of being acquired. These associations help to activate previously acquired knowledge and by creating links to pathways which have already been established, the potential for retention of new knowledge increases. These students were especially interested in teaching English to young children, and chose to analyze the rhythmic structure of a nursery rhyme as their first choice during the class described. When they discovered that the rhythmic structure of the nursery rhyme was much more predictable than their second choice, they decided to investigate this genre further as the topic of their final paper.

3.2 Poetry in EFL: Prosodic differences between a native and a non-native speaker (Laís, Letícia & Romero)

Analysis of the poem "A grain of sand"; written by Robert William Service (1874 – 1958):

While round the earth careens,
I hold a single grain of sand
And wonder what it means.

Poetry is a source of content-rich reading material; a model of creative language in use; a way to introduce vocabulary in context; and a way to focus students' attention on English pronunciation, rhythm, and stress.(KELLEEM, 2009)

Comparing both speakers, the native speaker (NS) held his voice for 0,6 seconds where the comma is placed, twice the time that the non-native speaker (NNS) did. [...] Another two comparisons that called our attention occurred in the first line "While round the earth careens", because while the NNS didn't stop until the comma, reading the sentence directly, the NS made pauses between almost every word of the sentence "While + round + the earth + careens". [...] It is clear that the native reader pauses a lot more in his speech while reading than the non native speaker does.

Comments: This group also enjoyed the 'poetry' class but became more interested in the different reading styles adopted during the presentation of conclusions. The students worked in pairs when examining the rhythmic structure of different poems, thus creating opportunities for students to share ideas and collaborate as they worked together to reach a common goal. And whenever pair work was used as a strategy, there would always be a specific time allotted for a communal presentation and discussion of results. Groups that completed the task more quickly were invited to select at least one other poem to test any hypotheses that might have arisen from their analysis. Then, after each pair had analyzed at least 2 different poems, they would then select one set of 8 lines and put their findings on the board – showing the stressed and unstressed syllables, the division into feet, rhyme structure, examples of alliteration etc. and present their conclusions to the rest of the class – starting off by identifying the poem and reading the lines they had selected.

After each presentation, the whole class was then invited to ask questions, add their own comments, observations, etc., thus guaranteeing an expanded general discussion which included input from the teacher who would always make it very clear that the students' opinions were valid and highly appreciated. During the general discussion of the placement of stressed and unstressed syllables in several of the examples, students would read and reread lines which were being questioned and the teacher (a native speaker of English) would also read and reread the same lines. During these exchanges, Laís, Letícia and Romero (who had not worked together during the original task) were all struck by the differences between the native and the non-native readings and decided to investigate this area together for their final paper.

3.3 The importance of the affective function of prosody for EFL (Hilquias, Ingrid & Roberta)

We played 3 recordings of a non-native speaker reading the same sentence using 3 different emotions to 16 EFL students. The students were asked to decide which emotion was used in each reading. The recordings were played twice. The first results are shown in the table below. The second time they listened to the recordings, all the answers were correct.

First Time	Recording 1 (Anger)	Recording 2 (Happiness)	Recording 3 (Sadness)
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<i>Anger</i>	11		
<i>Happiness</i>		16	
<i>Sadness</i>	05		16

Table 2: EFL students 1st attempt to identify 3 different emotions produced by the same speaker

We perceived that one emotion is different from another, even when the same person is saying the same phrase, each emotion has its own characteristics, like the anger emotion has the biggest intensity, the biggest pitch movements belong to happiness, and sadness has the longest duration.

Comments: The attitudinal function of prosody always attracts students' attention and a variety of questions inevitably arise during studies related to this area. This particular group of students wanted to know whether a non-native speaker would be able to communicate different emotions successfully in English. According to their experimental design, they played the data to a group of EFL students from the same cultural and language background as the speaker who recorded the different readings, so the successful identification of the different emotions may well have been influenced by this fact. Nevertheless, they recorded the same speaker reading the same neutral sentence and asked a group of judges to select one option from a list of three, thus successfully controlling many of the variables involved in investigations of this nature. They also read several academic articles which investigated the prosodic features of different emotions so became much more aware of the highly complex ramifications embodied by the attitudinal function of prosody.

3.4 The Prosodic Characteristics of Sarcasm (Sara)

According to Cheang and Pell (2008), no true acoustic pattern of sarcasm exists. And my analysis also concludes the same thing. Sarcasm is really present in our day-by-day speech, but there does not seem to be any specific pattern linked with this kind of emotion. As we saw with the analysis of the Chandler Bing sentences, we cannot conclude that there is one specific way of talking sarcastically. [...] The only characteristic that we found in all of the sentences is the presence of a short word or phrase meaning the opposite of its literal lexical meaning. When the character says "thank you", "Yeah" and "Very Good!" he means the opposite, which illustrates the sarcastic way of talking. [...] It is really important for us, as teachers of English, to make our students understand how emotions and intonation are important. In our world, we have to be ready to be inside part of the "communication" process and, to achieve effective communication, we have to understand and be able to communicate the real meaning of the speech.

Comments: Many students find it very difficult to know when a native speaker is being ironic or sarcastic – when the actual meaning being communicated is often directly opposed to the literal meaning of the words used. They feel insecure about their capacity to participate in real-life conversations with native speakers, and recognize that they need to learn more about this topic. The decision to invest in research therefore arises from a strong ‘need to know’ which is directly related to the students’ perception of a lack in their own knowledge. They are training to become teachers of English and many of them express a strong desire to be able to communicate effectively with native speakers of English as well as with non-native speakers from different language backgrounds. They are therefore strongly motivated to invest in research which they believe will help them to achieve their aims. In order to investigate the topic, Sara decided to use data from a favorite sitcom, *Friends*, also very popular with her colleagues. By choosing material which was meaningful to the whole group she guaranteed high levels of motivation and involvement throughout the research process, since students were encouraged to wander freely round the various computer stations when practical analysis was being carried out, so that peer assistance was always available and different groups could learn from each other. Although her original partner was unable to complete the course, she was supported by many of her colleagues who were curious to discover more about the prosodic characteristics of Chandler Bing’s sarcasm.

3.5 Prosodic Characteristics of a Charismatic Public Speaker as a Model for Successful Communication (Adriana & Larissa)

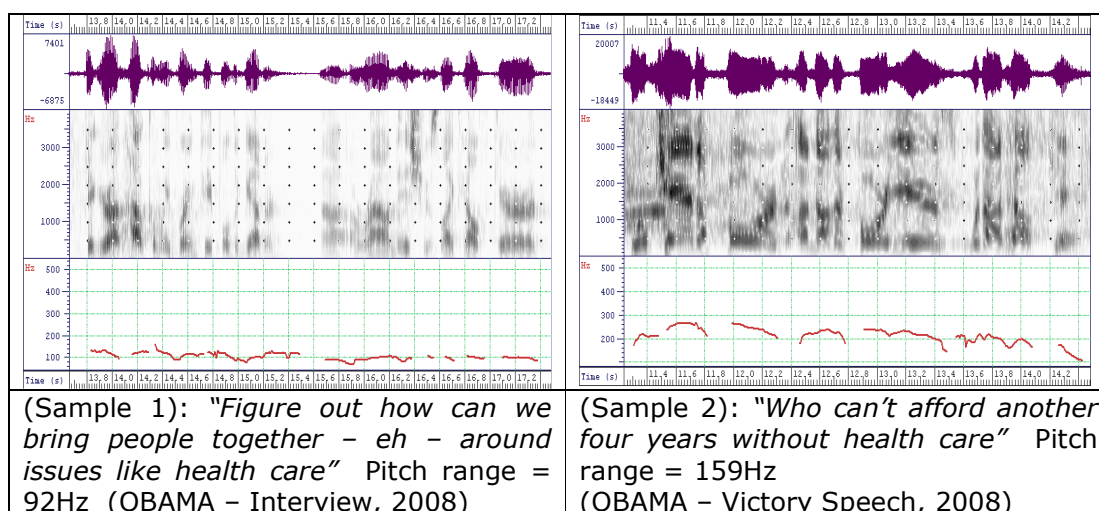


Figure 2: Pitch range measurement of two samples of speech by the same speaker in two different contexts

We compared Obama's speech in his 2008 campaigns with an interview in a traditional American talk-show, also in the year of 2008. The analyses were done with a taped victory speech from the 'Yes We Can' campaign and compared with an informal interview on the Ellen DeGeneres Show. The analyses done in this project showed that President Barack Obama changes the vibration of his vocal folds when he is participating in a public event giving a speech. And when he is speaking in an informal conversation, like an interview, he doesn't feel the need to raise his voice, because he will be understood at a lower level.

The project showed that students really could learn about speaking in public or when giving a school presentation, or in conversations, how to put their ideas, how to convince and be understood.

Comments: The idea of speaking in public intimidates many non-native speakers of English and when Adriana and Larissa discovered that a previous group had investigated the prosodic characteristics of Martin Luther King's '*I had a dream*' speech in order to try to identify factors which might contribute towards his success as a charismatic speaker, they immediately identified with this proposal and decided to choose a contemporary public speaker they admired – Barack Obama. They then decided to compare some of the prosodic characteristics of his 2008 Victory speech with an informal television interview. So although their research topic grew out of a previous paper, they modified the original proposals to such an extent that their paper became completely independent. They found suitable data by themselves and spent a lot of time listening to it in order to decide which factors they should analyze (pause distribution, number of stressed syllables, etc.) but when they ran the material through the WASP program, they immediately identified the pitch range and intensity as being the most outstanding features. However, given the fact that each recording was made under very different circumstances, they discounted the intensity differences and opted to focus on analyzing the pitch range, discovering that the Victory Speech had a much more expanded pitch range than the interview. This is therefore one of the prosodic features which can be consciously adopted by students when speaking in public in order to communicate more effectively with their audience.

3.6 The Contribution of Intonation to the Teaching of English (Jackson, José & Karoline)

First we went to the CLC [the community language school attached to the University] and there we researched about the presentation of information related to stress in the materials used for the basic and intermediate levels, analyzing how the discipline intonation is distributed in the teaching books and how they talk about identifying the most important word. Then we interviewed five students of different levels (basic and intermediate), asking two questions related to their study of

intonation (how they recognized the most important word in a phrase and if they thought the book had taught them how to recognize the most important word). After that we recorded these students reading a sentence in order to know where the main stress is within the sentence and compared these sentences with a native speaker of English.

EFL Students – Basic level	EFL Students – Intermediate level
I'm going to <u>LONDON</u> for a holiday.	I'm <u>GOING</u> to London for a holiday.
I'm going to <u>LONDON</u> for a holiday.	I'm <u>GOING</u> to London for a holiday.
<u>I'M</u> going to London for a holiday.	

Table 3: Nucleus placement for 5 different NNS readings of the same sentence

So it's up to the non-native speaker to know what word can be stressed without making her speech misunderstood by a native. [...] During this process, we analyzed the relation of intonation to EFL, focusing on 'stress' because it is important for the student and the teacher to connect with another language and know it to understand some important aspects, that often are part of both cultures and we have no notion of it. Because according to Shumin (1997, p.8): "Learning to speak a foreign language requires more than knowing its grammatical and semantic rules. Learners must also acquire the knowledge of how native speakers use the language in the context of structured interpersonal exchange, in which many factors interact."

Comments: The focus of this group is clearly on the teaching process itself. They started off by examining the didactic book used by the language school attached to the University to discover how the book dealt with the identification of the nucleus. They then asked students how they thought they recognized the most important word and whether the book had taught them what they needed to know. They recorded the students themselves, all reading the same sentence, and compared their nucleus placement with that of a native speaker. This project was very clearly grounded in the students' real life experience and they were making explicit connections between the theoretical concept and its manifestation in a specific practical teaching context familiar to the members of the group.

3.7 The Prosodic Characteristics of Emotion in Sports Narration (Ana Paula & Pryscila)

Time Frame	American Football		Swimming	
	<i>Pitch range</i>	<i>Velocity</i>	<i>Pitch range</i>	<i>Velocity</i>
Before the action takes place	180Hz – 70Hz = 110Hz	5.4 syll/sec	178Hz – 70Hz = 108Hz	4.2 syll/sec
During the action climax	439Hz-82Hz = 357Hz	2.3 syll/sec	341Hz – 121Hz = 220Hz	3.6 syll/sec

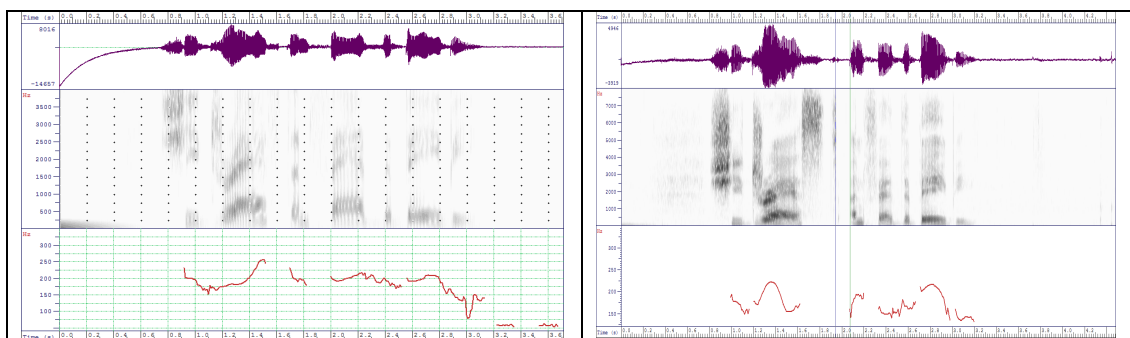
Table 4: Data Analysis of 2 different samples of sports commentary from 2 different sports events

As teachers of EFL, we should encourage our students to look for and listen to more audios, videos and movies which show emotion in realistic contexts since this might help the students to comprehend a little more about how the English system of intonation works, and they will therefore get used to the different emotions conveyed by prosody.

Comments: Ana Paula and Priscila were very interested in finding out more about the different ways that sports commentators expressed their emotions when commenting on different kinds of sports. They wanted to investigate situations where real emotion was being expressed and decided that the context of competition would be ideal. They then decided to select one sport which they considered to be more aggressive (American football) and one which they thought would be less aggressive (swimming), believing that the more aggressive sport would present more exaggerated prosodic features. In fact, the difference in speech velocity and the difference in pitch range between the action climax and the build up were both considerably greater for American football than for swimming, so, based on their data, their initial hypothesis was proven!

3.8 Perception of the Grammatical Function of Prosody (Lete, Luis & Manuela)

Concepts of intonation and chunking were analyzed using as a reference four sentences selected from the article named "Non-Native Perception and Interpretation of English Intonation", written by Raphael O. Atoyé (2005).



She (dressed and fed the baby)	She dressed (and fed the baby)
--------------------------------	--------------------------------

Figure 3: Two recordings of the same sentence which has ambiguous syntactic structure

Sepassi's (2006) studies affirm that "young learners were more inclined to follow prosodic cues and older learners were more inclined to follow syntactic ones." Consequently, it is expected that adults have more facility to comprehend the [written] meaning of the sentences, while teenagers will probably perceive the chunking aspect. Two groups listened to the recordings – 5 teenagers and five adults, all studying EFL at the same school, at Advanced 1 level. [...] Comparing both results, it's possible to observe that the average number of teenagers who understood the real meaning when comparing the numbers obtained for all four readings was lower than the average number of adults. Only an average of 5% of teenagers' answers were correct, against an average of 12,5% of correct adults' answers. The average number of answers related to the students who did not understand the meaning, but perceived the prosodic difference in intonation, is almost the same: 15% of adults' answers against 17,5% of teenagers'. On the other hand, the average number difference for people who did not understand the vocabulary was higher for the teenage group: 35% of teenagers' and 22,5% of adults' answers.

The amount of wrong answers shows that intonation is not being properly taught to EFL students. This can make it hard for those students of EFL who go abroad to comprehend what native speakers really mean.

Comments: This group wanted to find out more about learning differences between teenagers and adults, so they adapted an experiment used by Atoyé and asked a series of complex questions to try to discover whether teenagers were focusing on prosodic cues while adults would focus on syntactic or lexical cues. Despite the complexities involved and the small number of students involved, the results did in fact indicate that the teenagers had more difficulties understanding the vocabulary but were slightly more aware of the prosodic differences. However, the group also arrived at the general conclusion that intonation is not being taught effectively to EFL students. So hopefully, when they themselves start to teach professionally, they will try to remedy this situation.

3.9 Prosody and Meaning ... Seriously! (Raquel, Rebeca & Suzana)

In this first part of our data analysis we are going to analyze the word seriously as spoken by Meredith, a character from the TV Show called 'Grey's Anatomy'. Three different scenes were chosen and each one has different emotions being expressed.

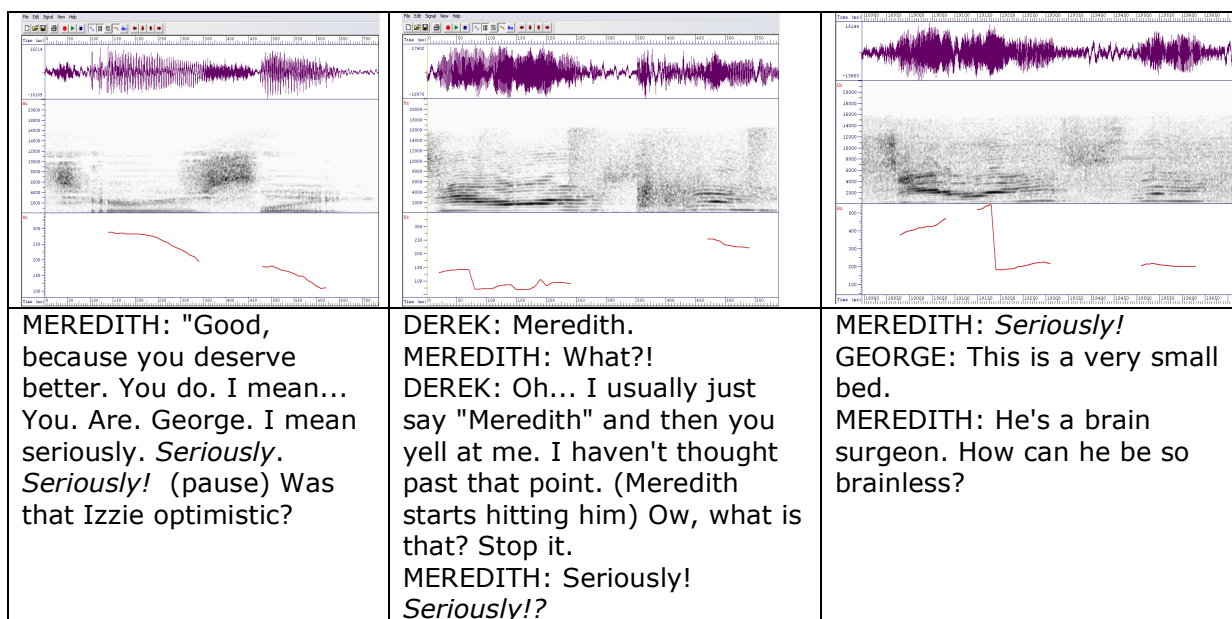


Figure 4: Three different recordings of the same character using the same word with different attitudinal effect

Marta Sabbadini (2006) affirms that "without intonation, it's impossible to understand the expressions and thoughts that go with words". Therefore, we are now going to analyze some data in order to observe how the speaker's emotion changes the intonation affecting the meaning of a sentence. We'll try to show that the same word can be understood in very different ways just through the intonation.

Comments: This group were seriously fascinated by several American sitcoms and decided to use material from their favorite serial in order to investigate the attitudinal function of emotion. After watching several episodes in order to try to identify the focus of their research, they were struck by the constant occurrence of the same word 'seriously' which was used by several different characters to communicate an array of different meanings. Again, by encouraging students to work with material with which they have a strong affinity and which they believe to be highly significant, substantial levels of motivation and commitment to the project are frequently observed.

3.10 Using Humor in the EFL Classroom (Daiene & Natielle)

Phrase	Context	Pitch range	Pitch Movement
1. "Things seem to be getting a little <u>blurry</u> , isn't it?!"	Comedy show	162 to 438 Hz = 376 Hz	207 Hz

2. " <u>Read</u> the bottom line"	Comedy show	128 to 535 Hz = 407 Hz	509 Hz
3. "Look ma! I'm <u>road</u> kill"	Comedy Film ('The Mask')	96 to 502 Hz = 406 Hz	408 Hz
4. "I think he's afraid that might never <u>come back</u> "	Interview	77 to 242 = 165 Hz	67Hz
5. "Specially <u>penguins</u> , about what is to love penguins"	Interview	165 to 126 to 96 Hz = 69 Hz	69Hz

Table 4: Phrases spoken by the actor Jim Carey in 2 different situations, (a) when being funny and (b) in an interview situation. In each phrase the measurements are related to the focused word or short phrase indicated by underlining.

As part of this project, we showed two videos: a Funny Scene in 'The Mask' 1994 and an Interview from the today show 2011, to thirty-three intermediate students of a private English school. We asked the students: "Qual forma poderia ser usada por seu professor para melhorar a aula, a divertida ou a tradicional?"⁸ 29 students said the better way was the first option and 4 preferred the second option.

Comments: Comedy is invariably an area which attracts students. They want to discover the prosodic factors involved in the effective communication of comedy. In this case Daiene and Natielle decided to measure the pitch movement of the nucleus in phrases produced by the same actor in two different contexts, in a comedic situation and an interview – and their results showed very clear differences, both pitch range and pitch movement were much more exaggerated when the actor was being funny. The students thoroughly enjoyed 'having to' watch several comedic films and comedy shows in order to identify suitable material. So once again, by encouraging students to identify a topic which interests them, the high level of motivation which is generated helps to carry them through the more arduous tasks involved in their research projects.

4. Conclusion

Hopefully, by presenting and discussing all ten research projects produced by a specific class of first-year undergraduate students as part of their 60 hour Prosody course, the reader will be able to appreciate the variety of topics explored by the different groups who worked together

⁸ Which material would you prefer your teacher to use to improve class, the funny one or the traditional one?

during the same term. Several brainstorming sessions would be held with the whole class after reading different academic articles, when students were asked to make explicit connections to their areas of interest or to their personal experiences. Whenever class work was carried out in pairs or in small groups, results would be presented to the whole class, and again a general discussion of theoretical concepts would arise linked to the practical exercises which had been just been concluded. Having formed small groups around initial candidate themes, endless variations would be scrutinized and debated amongst the members of each group before final decisions were made. Throughout this whole process, the thoughts, ideas, views and opinions expressed by each student were valued as necessary input towards developing the habit of critical thinking while respecting the opinions of others. And since they were actively engaged in designing their own experiments, they were much more intrinsically than extrinsically motivated.

As a teacher, I personally find the whole process of identifying questions for investigation fascinating and am constantly impressed and challenged as new ideas and variations are produced every single term. By encouraging students to define their own research topics and by creating opportunities for authentic communication through supportive interaction, ideas are shared at several different levels throughout the problem-solving process. Each student is inevitably exposed to a number of research projects in process and is able to fully appreciate many of the problems which arise as colleagues search for relevant data and attempt to understand how the results relate to the original hypotheses.

Every teacher needs to decide exactly what they are going to teach in terms of content, but we must also think seriously about the strategies we intend to use in order to guarantee the end product we are aiming for. Clearly, when teachers elect strategies which have not previously been experienced by students, or which have been applied very superficially, they will rarely be successful. For example, when attempts to encourage students to work in groups are based on a random collection of students being told to work as a unit in order to carry out tasks defined solely by the teacher, very often one student will decide to lead the group and will often fulfill the task without including any input from the other members of the unit. Therefore if we believe that cooperative teaching and learning is beneficial, we must monitor the process in order to ensure that collaboration is in fact taking place.

The principal outcome of this course, as mentioned in the abstract, is to promote a greater awareness of prosody as an important factor in the teaching of effective language communication. The final papers produced by the students as part of their self-directed research projects, together with the oral presentations of their findings and the positive

reactions and exchange of ideas which arise throughout the research process itself, clearly testify to the fact that the students have attained this objective and hopefully may carry forward into their future some of the hidden aims of the course represented by the different strategies used. These aims are powerfully expressed by Arthur L. Costa (In. DICKINSON, 1991: 13) in his article '*Educating the Global Intellect*':

- The cooperative skills [students] learn in schools today equip them with the empathy to build the global community of the next generation.
- The problem-solving skills they learn in school today provide them with the stamina to tackle the immense problems facing our ecological future.
- The communication skills they learn today furnish the ability to work in the emerging corporate world era.
- Learning how to learn today fosters the continuance of learning throughout a lifetime.
- The best way to predict the future, however, is to invent it now.

Let us join together to predict a better future for global communication!

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